Training Opportunity

Institute on Systems Science and Health (ISSH 2012)

http://obssr.od.nih.gov/issh/2012/index.html

June 10-15, 2012
St Louis, Missouri

Produced and funded by

The Office of Behavioral and Social Sciences Research

at the
National Institutes of Health

NIH...Turning Discovery into Health

In Partnership with

The Hygeia Dynamics Policy Studio

Hosted by

Washington University
Brown School of Social Work

GEORGE WARREN BROWN SCHOOL of Social Work
Leading Knowledge. Leading Change.

Washington University in St. Louis

With support from

GT Consultants, Inc.

GT Consultants, Inc.

Application Deadline: February 5, 2012 11:59pm (Eastern)

ISSH 2012 RATIONALE AND OBJECTIVE: During the past couple of years, there has been a surge of interest in the application of systems science methodologies (aka, modeling and simulation) to behavioral and social science phenomena, particularly with respect to health topics. For example, one year ago, the Institute of Medicine issued a report, "*For the Public's Health: The Role of Measurement in Action and Accountability*" (December 2010; http://www.iom.edu/Reports/2010/For-the-Publics-Health-The-Role-of-Measurement-in-Action-and-Accountability.aspx). Recommendation 6 of this report states, *The committee recommends that the Department of Health and Human Services (HHS) coordinate the development and evaluation and advance the use of predictive and system-based simulation models to understand the health consequences of underlying determinants of health. HHS should also use modeling to assess intended and unintended outcomes associated with policy, funding, investment, and resource options*. ISSH addresses this recommendation by providing training to help prepare investigators to engage in the type of projects specified in Recommendation 6.

ISSH is a training course, not a scientific conference. It is not a junior level or post-doc course; it is designed for investigators at all stages of their career, from doctoral candidate through full professor. The objective is to provide attendees with a thorough introduction to a selected systems science methodology that may be used to study behavioral and social dimensions of public health challenges.

Participants in the week-long course will focus on one of three methodologies: agent-based modeling, system dynamics modeling, or network analysis. The ideal candidate is an investigator, at any stage of his or her career, who has had little or no formal training in systems science and aims to use the knowledge gained at ISSH to develop proposals to the NIH for research projects to improve population health and health equity.

The CURRICULUM will help participants:

- Understand the general principles of systems science and different methodological traditions, including their strengths, limitations, and types of problems for which they are best suited;
- Work through specific problems using a chosen methodology and become familiar with relevant software package(s);
- Appreciate the potential for applying systems science methodologies to problems of population health and disease, especially those in which behavioral and social factors figure prominently;
- Prepare stronger applications to funders (especially NIH) in those areas where systems science, behavioral and social processes, and population health intersect.

FACULTY: Faculty are leading experts (practitioners and teachers) with extensive methodological experience. ISSH 2012 organizers and track leaders are:

ISSH Planning Committee

Chair

Patricia Mabry, PhD
Office of Behavioral and Social Sciences Research
National Institutes of Health

Co-Chair

Bobby Milstein, Ph.D., MPH
Hygeia Dynamics Policy Studio

Host

Peter Hovmand, Ph.D
Washington University,
Social Systems Design Lab

Logistical Support

Jackie Smith
GT Consultants, Inc.

Track Leaders

System Dynamics Modeling

Peter Hovmand, Ph.D
Washington University, St. Louis
Social Systems Design Lab

Kristen Hassmiller Lich, Ph.D
University of North Carolina, Chapel Hill

Network Analysis

Douglas Luke, Ph.D
Washington University, St Louis

Agent-based Modeling

Ross Hammond, Ph.D.
Brookings Institution

Confirmed speakers include:

Plenary: Laura K. Landry, President and CEO, Fannie E. Rippel Foundation

Guest lecturers, System Dynamics Modeling track:

George Richardson, University at Albany
Krystyna A. Stave, University of Nevada, Las Vegas
Sara Metcalf, University at Buffalo

Additional speakers for plenary sessions and track-specific presentations will be announced as they are confirmed. For up to date listing, please visit: http://obssr.od.nih.gov/issh/2012/index.html

Program Information

ISSH will feature plenary sessions on topics of general interest as well as in-depth, hands-on training in specific tracks. On the application form, participants will rank their preference among the three available tracks: **(1) Agent-Based Modeling; (2) System Dynamics Modeling; and (3) Network Analysis**. All tracks will provide an introduction to the relevant methodology with examples drawn from public health. Ample time will be provided for participants to network and form collaborations that will last beyond the course itself. Attendees are expected to attend their assigned track and may not elect to switch tracks or attend portions of other tracks. However, an introduction to each track will be given during plenary time, giving all participants a basic understanding of all three methodologies. Note that the ISSH curriculum is fairly intense with very full days. Participants are expected to attend the entire course which includes several evening activities.

Eligibility

To be eligible for ISSH 2012, individuals must have:

- Completed or be currently enrolled in a Ph.D., M.D. or equivalent terminal degree within their field.
- Have in mind a public health problem/opportunity that would benefit from the appropriate use of one or more systems science methodologies.

The ideal candidate is an investigator, at any stage of his or her career, who may have had had prior exposure to systems science methodologies, but has had little or no formal training in systems science. In addition, he or she will be actively pursuing an independent research career and will possess a desire to focus future work on applying systems science approaches to population health problems featuring behavioral and social processes. The ideal candidate will aim to leverage the knowledge gained at ISSH to develop grant proposals to the NIH. Priority will be given to investigators who have demonstrated research potential/experience and who will clearly benefit from systems science training. ISSH alumni are not eligible to apply.

Depending on size and quality of the applicant pool, there may be a very small number of slots (i.e., 3 or fewer) available for federal staff. Those who oversee federal grant programs that span systems science, behavioral and social science and health would have the best chances of being selected. **Federal staff** who would like to apply should contact the Chair of the Planning Committee directly at mabryp@od.nih.gov.

Applicants are NOT required to be citizens, permanent residents, or non-citizen nationals of the United States. HOWEVER, expenses will only be paid for domestic (within the U.S.) travel.

In addition to the above stated criteria, the selection committee will attempt to admit a diverse pool of participants. For example, an effort will be made to achieve diversity with respect to: race/ethnicity, gender, educational discipline, research topic, institutional affiliation, stage of career, and geographical location.

Women, minorities, and individuals with disabilities are encouraged to apply.

Location

ISSH 2012 will be held at the Washington University in St. Louis on **June 10-15, 2012**. The program will begin with a welcome session at **6:00pm on Sunday, June 10** and will conclude by **2:00pm on Friday, June 15**. Participants are expected to attend the entire course.

Costs

The NIH Office of Behavioral Sciences Research will pay for travel to and from the course site, room and board, and all course materials. There are no additional fees although participants are asked to furnish their own laptop computer; a limited number of laptops will be available on loan to those who do not have an appropriately configured laptop.

Accreditation

Currently there is no CE/CME accreditation associated with this course.

Application Process

Application materials should be submitted as .pdf files at: **http://obssr.od.nih.gov/issh/2012/apply.html**

A complete application packet must include:

1. One Application Cover Letter with applicant signature
2. Curriculum Vitae
3. Two letters of recommendation
    - From individuals who have worked professionally with the candidate within the last three years.
    - Can be deans, department chairs, mentors, division chiefs, supervisors, colleagues etc.
4. Brief personal statement of career interests and how ISSH fits into these interests as well as a summary of prior learning related to systems science methodologies. Limit: 1 page.
5. Research interests, including a succinct statement of a research question that you are interested in addressing with one or more of the three systems science methodologies highlighted at ISSH. Limit: 1 page.

Federal staff who would like to apply should instead contact the Chair of the Planning Committee directly at mabryp@od.nih.gov.

Applications must be received no later than 11:59pm eastern time, February 5, 2012.

Participants will be notified of their status on or before March 15, 2012.

Please direct all inquiries to: Ms. Jackie Smith, GT Consultants, Inc. at (770) 591-1343 or **jackie@gtconsultantsinc.com**.

Background and Resources

ISSH 2012 builds on prior efforts to raise awareness among behavioral and social scientists about the potential uses for systems science methodologies to improve population health and health equity (see Mabry et al., 2008, AJPM http://www.ajpm-online.net/article/S0749-3797(08)00431-5/abstract). Links to selected videocasts and related material are provided below.

2011 Institute on Systems Science and Health (2011 ISSH)
University of Pittsburgh
http://obssr.od.nih.gov/training_and_education/issh/2011/index.html

2010 Institute on Systems Science and Health (2010 ISSH)
Columbia University
http://obssr.od.nih.gov/training_and_education/issh/2010/index.html

2009 Institute on Systems Science and Health (2009 ISSH)
University of Michigan
http://obssr.od.nih.gov/training_and_education/issh/2009/index.html

2007 Symposia Series on Systems Science and Health

Systems Methodologies for Solving Real-World Problems: Applications in Public Health
http://videocast.nih.gov/launch.asp?13712

Network Analysis: Using Connections and Structures to Understand and Change Health Behaviors
http://videocast.nih.gov/launch.asp?13878

Agent Based Modeling: Population Health from the Bottom Up
http://videocast.nih.gov/launch.asp?13931

System Dynamics Modeling: Population Flows, Feedback Loops and Health
http://videocast.nih.gov/launch.asp?14005

If you experience difficulty accessing these videocasts, contact Patty Mabry at **mabryp@od.nih.gov**.